

App. No. 10/829,332  
Amendment dated February 15, 2006  
Reply to Office action of November 15, 2005

## **REMARKS**

### ***Summary of Amendments***

Claims 1-11 have been amended in the first place to recite that the claimed subject matter is directed to a bearing assemblage ready for welding, rather than to a hydrodynamic bearing in its final form in which the joint surfaces of the claimed shaft and disk member have been welded together. These claims have further been amended for clarity.

Withdrawn claims 12-15 have been amended to depend respectively from claims 1, 2, 4 and 7, as method claims to form the hydrodynamic bearings that claims 1, 2, 4 and 7 recite.

For the record, it is noted that "assemblage" as intended by the present amendments has the following-quoted meaning given by, for example, *The American Heritage® Dictionary of the English Language*: Fourth Edition, 2000: "4. A fitting together of parts, as those in a machine."

By the present amendments, the following relationships between claims and the figures illustrating the subject matter to which the claims are directed should be clear.

Claim 2 – Figs. 5 and 7;  
Claim 3 – Fig. 5;  
Claims 4 and 5 – Fig. 6; and  
Claims 7-9 – Fig. 6.

Claim 17 has been amended to depend from claim 12, and thus to claim 1 by chain of dependency.

### ***Election/Restriction***

It is respectfully submitted that by the present amendments, claims 4-6 and 11-15 should be rejoined.

### ***Claim Rejections - 35 U.S.C. § 112***

Claims 1-3, 7-10 and 17 and 18 were rejected under 35 U.S.C. § 112 for lack of clarity, in particular due to recitations of a final product while comprising structure

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of intermediate form. Claim 1 has been amended to recite an "assemblage" as explained above. Claim 1 is reproduced in clean form below.

**1. An assemblage for forming a hydrodynamic bearing, the assemblage comprising:**

**a shaft unit including**

**a shaft having a cylindrical outer circumferential surface defining a first side of a radial hydrodynamic bearing section, and, orthogonal to the cylindrical outer circumferential surface, an end surface defining a first joint surface, and**

**a disc member of diameter larger than that of said shaft and having a flat surface defining a second joint surface, for facing the end surface of the shaft for being joined and fixed thereto;**

**a bearing member having a cylindrical inner circumferential surface opposing and rotatable relative to the cylindrical outer circumferential surface of said shaft, to define a second side of the radial hydrodynamic bearing section;**

**an annular, axially protruding projection of diameter smaller than that of said shaft and configured so as to melt under a predetermined applied voltage, said projection provided on one of either said first or second joint surfaces; and**

**an annular recess outer circumferentially of diameter smaller than that of said shaft yet larger than that of said projection, and dimensioned so as to receive said projection as molten matter, said recess provided on one of either said first or second joint surfaces; wherein**

**by bringing said first and second joint surfaces into contact and applying a predetermined voltage across said shaft and said disc member, said projection becomes molten matter and flows into said recess, bringing said first and second joint surfaces into contact with each other and welding said shaft and said disc member together.**

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It is respectfully submitted that claim 1 now is consistent in its recitation of intermediate, pre-welded structure, and that therefore the rejection under this section is overcome. It is likewise submitted that the remaining claims rejected under this section all depend directly or indirectly from claim 1, and thus the rejection of these claims is overcome.

***Claim Rejections - 35 U.S.C. § 102***

Claims 1-3, 7-10 and 17 and 18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Pat. App. Pub. No. 2003/0174916 to Aiello.


This rejection was made of claims 1-3, 7-10 and 17 and 18 "to the extent understood," which, due to the problems with the claim language addressed by the present amendments, was not the full extent due the nature of the invention.

It is believed that the subject matter that distinguishes claims 1-3, 7-10 and 17 and 18 over Aiello is now clear.

Accordingly, Applicant courteously urges that this application is in condition for allowance. Reconsideration and withdrawal of the rejections is requested. Favorable action by the Examiner at an early date is solicited.

Respectfully submitted,

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